



UNITED STATES PATENT AND TRADEMARK OFFICE

C/K

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,428	08/07/2001	Lei Wu	4718420005000	3614
25225	7590	10/05/2005	EXAMINER	
MORRISON & FOERSTER LLP 3811 VALLEY CENTRE DRIVE SUITE 500 SAN DIEGO, CA 92130-2332			CHEU, CHANGHWA J	
			ART UNIT	PAPER NUMBER
			1641	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,428

Applicant(s)

WU ET AL.

Examiner

Jacob Cheu

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-20, 25-31, 33, 34, 56, 57, 67, 68, 92, 93, 95 and 115-119 is/are pending in the application.
- 4a) Of the above claim(s) 35-55, 58-66, 69-91 and 96-114 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-20, 25-31, 33, 34, 56, 57, 67, 68, 92, 93, 95 and 115-119 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

500

DETAILED ACTION

Applicant's amendment filed on 7/8/2005 has been received and entered into record and considered.

The following information provided in the amendment affects the instant application:

1. Claims 15, 21-24, 32 and 94 are cancelled.
2. Claims 117-119 are added.
3. Claims 35-55, 58-66, 69-91 and 96-114 are withdrawn from further consideration.
4. Currently claims 1-14, 16-20, 25-31, 33, 34, 56, 57, 67, 68, 92, 93, 95 and 115-119 are under examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 13, 16-20, 25-31, 56-57, 67-68, 92-93, 95, 115-119 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaye et al (GB 2306484).

Kaye et al. teach a microdevice for combinational library screening. Kaye et al. teach that the microdevice comprises a substrate, a photorecognizing coding pattern on said substrate, and a binding partner for binding target molecule of interest (See page 6, line 5-15; page 2, line 1-5; Figure 2 and 5). It is noted that the photorecognizable code taught by Kaye et al. consists of different shapes and forms, including hollows, grooves, or notches, which are holes not penetrating through the entire depth of the substrate (See page 6, line 5-15; Figure 2 and 5; *Particular Figure 2, second example, holes not penetrated through the substrate*)(emphasis added). With respect to the dimensions, the microdevice taught by Kaye et al. can be within from 1 to 500 microns ranges (See page

9, last paragraph). The microdevice of Kaye et al. does not comprise an anodized metal surface layer (See page 10-15; Figure 2-5).

With respect to claim 2, Kaye et al. teach that the material for microdevice can be of glass, rubber (See page 5, line 24-26).

With respect to claim 3, 11, Kaye et al. also teach use of silicon dioxide or a metal layer for the substrate (See Abstract).

With respect to claim 4, the microdevice taught by Kaye et al is hydrophilic or hydrophobic (See Figure 2-5; page 2-3).

With respect to claims 5, 116, the shape of the microdevice can be different, such as rectangle or square (See Figure 2).

With respect to claims 6, 117-119, Kaye et al. teach that the thickness of the substrate can be the range between 5-50 microns (See page 9, line 21-25; page 21, line 17-21).

With respect to claims 7-10, Kaye et al. teach that the shape of the microdevice can be varied, and the size can be from 1 to 500 microns (See page 9, line 22-25).

With respect to claims 13, 28-31, Kaye et al. also teach using electromagnetic materials for facilitation of the binding by physical force, such as magnetic interaction (See page 15, line 15-17).

With respect to claims 17-19, Kaye et al. teach the photorecognizable code on the microdevice can be of a plurality of holes on the substrate (See Figure 2; page 6, line 9-10).

Art Unit: 1641

With respect to claims 19-20, Kaye et al. teach lithographical micromachining for manufacturing the microdevice (See page 12, line 13-15; page 11, line 12-13).

With respect to claims 25-27, the microdevice taught by Kaye et al. can be used to detect enzyme or receptors (See page 2, line 1-5).

With respect to claims 56-57, Kaye et al. teach that the microdevice can be manipulated on different layer(s) through micromachining or photolithographic (See page 12-13).

With respect to claim 93, the microdevice comprises a metal layer and a non-metal layer (See Abstract; page 10-12).

With respect to claim 115, the microdevice taught by Kaye et al. does not comprise a microprocessor (See Figure 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1641

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 12 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Kaye et al. in view of Zhou et al. (WO 0054882).

Kaye et al. reference has been discussed but is silent in teaching use of aluminum layer or nickel alloy.

Zhou et al. teach a biochip having arrays of individual addressable microelectromagnetic units. Zhou et al. teach different materials, such as glass, silicon dioxide, *aluminum*, silicon dioxide or *nickel alloy* layers (Col. 9, line 52 to Col. 10, line 12; Col. 14, line 60-65). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to have provided Kaye et al. with the options of different substrate materials, e.g. aluminum or nickel alloy as taught by Zhou et al. since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for optimization of the result. In re Boesch, 617 F.2d 272; In re Leshin, 125 USPQ 416.

6. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaye et al. in view of Cattell (US 6180351).

Kaye et al. reference has been discussed but is silent in teaching use of a detectable marker, such as fluorescent label for detection purpose.

Cattell et al. teach an addressable array, such as DNA detection. Cattell et al. teach use of fluorescent makers for increase detection efficiency (Col. 1, line 22-25). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to have provided Kaye et al. with the fluorescent maker as taught by Cattell et al. to

Art Unit: 1641

increase detection sensitivity since it is well known in the art to use fluorescent label marker for detection purpose.

Response to Applicant's Arguments

7. Applicant's arguments with respect to claims 1-14, 16-20, 25-31,33, 34, 56,57,67, 68, 92, 3, 95 and 115-116 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. No claim is allowed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Cheu whose telephone number is 571-272-0814. The examiner can normally be reached on 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

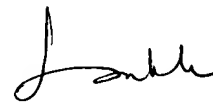
Jacob Cheu

Examiner

Art Unit 1641



September 27, 2005



LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600
09/30/05